AsantéFAST 100
Management Module

Installation Guide
and User Manual

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1
Introduction

The AsantéFAST 100 Management Module

Thank you for purchasing the AsantéFAST 100 Management Module, an external addition to the existing unmanageable AsantéFAST 100 Hub.

The AsantéFAST 100 Management Module adds SNMP intelligence to the AsantéFAST 100 hub or hub stack, enabling the stack to be managed through the module's own built-in command line interface via terminal, Telnet, AsantéView network management software, or any other SNMP-compatible network management software.

A single module is capable of managing an entire stack of 100BASE-T hubs on a per-stack, per-hub, per-port basis, allowing you to get a pulse on your network's performance, traffic, bottlenecks, collisions and other network vital signs. Management capabilities are extended from the managed unit to all attached hubs (up to 14 in a stack), providing complete management for up to 168 ports.

Figure 1-1 The AsantéFAST 100 Management Module

Sharing the AsantéFAST 100 Hub's design and expansion card technology, the Management Module fully integrates with the high-speed backplane of the hub — the interconnected hub stack can then be managed as a single logical repeater.

Features

- ❏ Monitors a Fast Ethernet network, providing current network information such as data flow, port utilization, station information and enhanced security features
- ❏ Gathers data traffic statistics on a per-stack, per-hub, per-port basis, providing collision detection, link tests, relocking, and retiming
- ❏ Provides instant MAC address-to-IP address mapping — locate and isolate a faulty system instantaneously
- ❏ Contains a front panel LED bargraph display for network utilization and collision
- ❏ Contains two DB-9 and RS232 ports for both console connection and modem connection
- ❏ Complies with MIB I, MIB II, and RFC 1516 Repeater MIB standard specifications
- ❏ Built-in SNMP and TCP/IP support — easily integrates into the existing network management environment
- ❏ Supports up to 168 ports, or 14 stackable Asanté-FAST 100 Fast Ethernet hubs

Package Contents

- ❏ AsantéFAST 100 Management Module
- ❏ README FIRST sheet
- ❏ Installation Guide / User Manual
- ❏ Registration Card
- ❏ Power Cord
- ❏ Rack Mount Hardware
- ❏ Expansion Card

2
Installation

Installation Overview

Installation of the AsantéFAST 100 Management Module consists of connecting the module to the unmanageable AsantéFAST 100 Hub or hub stack which you want to manage. Once the module is connected, you can setup access to the module's command line interface using either in-band or out-of-band management (see Chapter 3 for more information).

Placement of the Management Module

The AsantéFAST 100 Management Module snaps onto an AsantéFAST 100 Hub or anywhere within the stack of hubs; however, the following guideline must be followed to ensure proper operation of the Management Module:

- **At least one of the AsantéFAST 100 hubs in your stack must be a Master Hub.** The Master Hub must be installed at the **bottom** of the hub stack. Once the Master Hub is installed at the bottom of the stack, the Management Module can then be installed anywhere within the stack of hubs.

  To identify a Master Hub, look for the Master Hub label ("M" label) near the Uplink port on the front panel of any AsantéFAST 100 Hub (see figure 2-1).

  If there is no Master Hub in your hub stack, contact Asanté technical support for a Master Hub replacement before installing the Management Module (see Appendix B for technical support information).

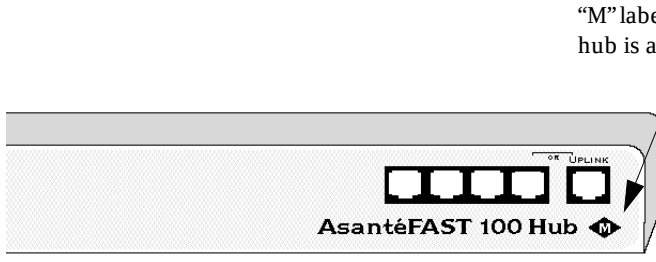


Figure 2-1 AsantéFAST 100 Master Hub

Figure 2-2 AsantéFAST 100 Hub

To Install the Management Module

Before proceeding with the installation, make sure you have the following items:

- ❏ AsantéFAST 100 Management Module (figure 2-3)
- ❏ Expansion Card (figure 2-4)
- ❏ Power Cord
- ❏ Rack Mount Hardware (optional)

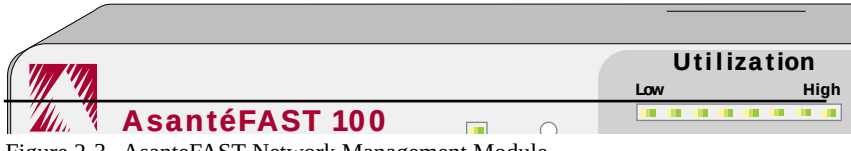


Figure 2-3 AsanteFAST Network Management Module

Figure 2-4 Expansion Card

1 You must **power off the entire AsantéFAST 100 Hub or hub stack** to which you are connecting the Management Module.

2 Determine where in the stack you want to place the Management Module (following the placement guideline as described on page one of this chapter).

Note: For these instructions, the Management Module will be placed on top of an AsantéFAST 100 Hub.

3 Remove the label covering the expansion slot on top of the AsantéFAST 100 Hub (located on the top right corner of the hub).

4 Insert the expansion card into the top of the hub— see figure 2-5 (or into the top of the Management Module if the Management Module is being placed on the bottom of a hub).

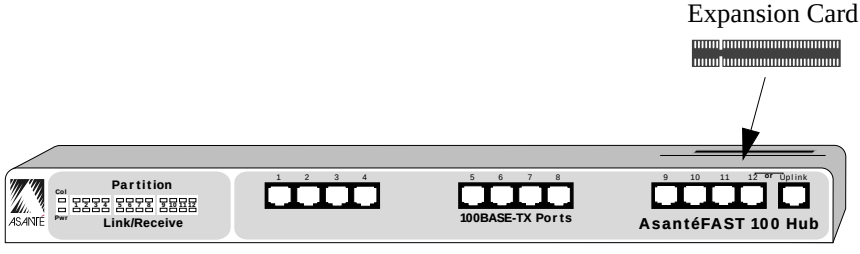
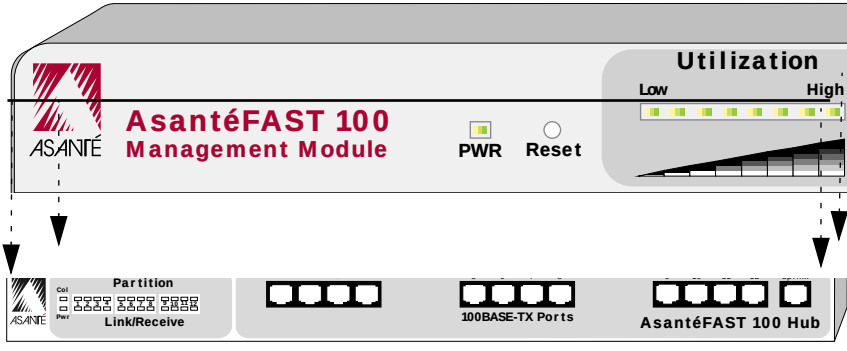


Figure 2-5 Inserting expansion card into an AsantéFAST 100 Hub.

5 Holding the AsantéFAST 100 Management Module, lower the module straight down on top of the hub.

6 When you have lined up the expansion card on the hub with the Management Module's expansion slot (located underneath the module), press down lightly on the top of the Management Module until the edge connector at the rear of the unit is fully inserted (see figure 2-6).

AsantéFAST 100 Management Module



AsantéFAST 100 Hub

Figure 2-6 Connecting the AsantéFAST 100 Management Module with a Hub

7 Once the hub and module are connected, plug the Management Module's power cord into the power socket on the rear panel of the Management Module.

8 Plug the other end of the power cord into a wall outlet or other source of power.

Caution: Before powering on the Management Module, you must power on the bottom module in the stack first! The proper power up cycle must be followed in order for the Module to operate. The proper power-up cycle when using a Management Module in a stack of AsantéFAST 100 hubs is from the bottom up.

9 Turn on the power switch on the **bottom module** in your network stack. The power switch is located on the left side of the module's back panel.

10 Continue to power-on each module (following the proper power-up cycle) in the stack.

3

Command Line Interface

The AsantéFAST 100 Management Module monitors a network's performance, collisions, traffic, and other vital signs, and allows you to manage the information using its own built-in command line interface.

This chapter contains reference information on how to connect to the command line interface, as well as information on the Main Menu and submenus contained within.

In-band management

In-band network management allows network managers to manage, control and monitor their networks over the Ethernet network using TCP/IP. In-band management is usually done with a device that is running some type of network management software and that is connected directly to the network.

To access the command line interface via in-band management, use a Telnet utility to connect to the Management Module (see figure 3-1).

Out-of-band management

Out-of-band network management allows network managers to manage, control and monitor their networks directly from the Management Module using either a dumb terminal or a modem. Out-of-band network management is guaranteed even when the in-band Ethernet is down.

To access the command line interface using out-of-band management, connect a dumb terminal directly to the Management Module's Console port (located on the Module's front panel) or connect a modem to the Module's RS-232 port on the front panel (see figure 3-1). In both cases, use a straight-through serial cable for connection.

The following diagram demonstrates the possible in-band and out-of-band management connections for accessing the Management Module.

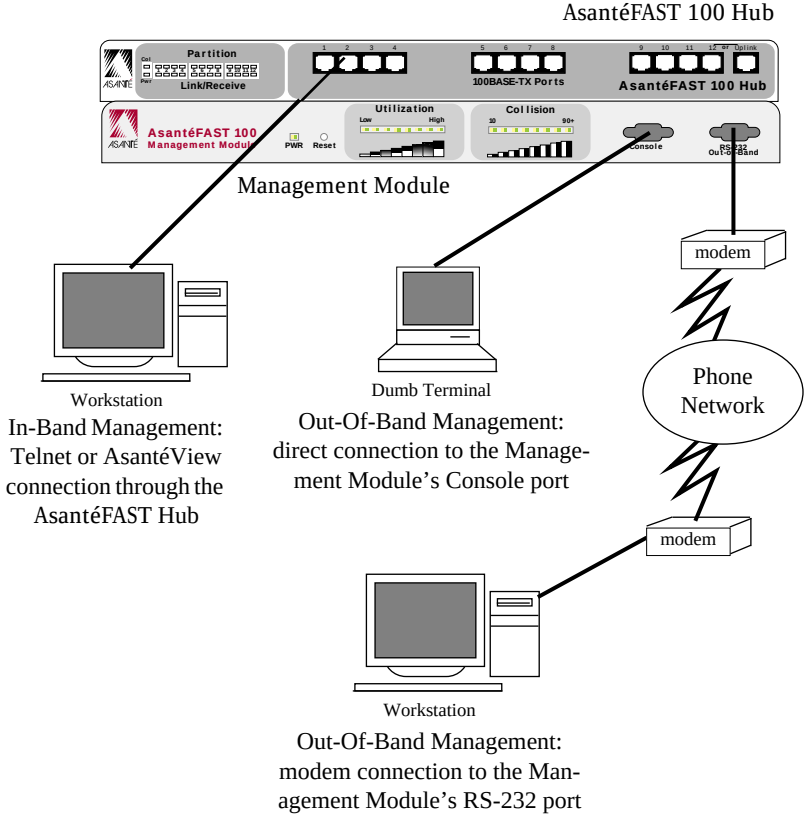


Figure 3-1 In-Band and Out-Of-Band Management Diagram

Using the Command Line Interface

Each module in the interconnected AsantéFAST 100 Management Module and 100 Hub stack is assigned a Group number. The bottom module is assigned Group number 15, the next module up is Group 14, and so on. When using the command line interface to monitor the hub stack, each module is referred to by that group number.

After you connect to the command line interface using either in-band or out-of-band management as described above, the following main menu will appear:

Main Menu

```
================================================
AsanteFast 100 NMM Local Management Version 1.0C
Copyright (c) 1992-96 Asante Technologies, Inc.
================================================

Main Menu

<Cmd>           <Description>
  g         General Information
  c         Configuration
  s         Statistics

Command>
```

Figure 3-2 Management Module Main Menu

From the Main Menu, you can access three submenus — General Information, Configuration, and Statistics. (If you are using Telnet, a fourth option will be available — Close Connection. This option closes your remote connection to the Management Module's command line interface.)

Accessing a Submenu

To access a submenu, press the command letter of the corresponding menu option (e.g., type **g** for General Information). There is no need to press return, the system will automatically bring you to the next submenu.

Exiting a Submenu

In most cases, you can press **q** to exit a submenu (as displayed on certain screens). However, in some circumstances a submenu will contain additional choices. Some of these choices are command lines which ask you to directly enter information (for example, the "Set Console Password" command line from the Configuration Main Menu asks you to enter a new password). To exit these command lines, press **ctrl-c**.

General Information Screen

The General Information screen displays current statistics on the Management Module such as system administration information, hub IP addresses, subnet mask and default router information, hub boot information, and out-of-band parameters information.

The information displayed on this screen is for viewing purposes only; you cannot make any changes to the network information from this screen.

Accessing the General Information Screen

From the Main Menu, type **g** to access the General Information screen. The following screen will appear:

```
AsanteFast 100 NMM with SNMP Agent and TELNET Software V1.0D
Compiled Date: Mar 12 1996, Time: 10:47:19

System Administration
    Hub Name:          <none>
    Hub Location:      <none>
    Hub Contact:       <none>
Hub ID/MAC, IP Address, Subnet Mask and Default Router
    ID/MAC Address:    00:00:94:75:94:EE
    IP Address:        192.203.54.224
    Subnet Mask:       255.255.255.0
    Default Router:    192.203.54.1
Hub Boot Information
    Boot Load Mode:    LOCAL
    Boot Mode:         TFTP
    Boot Server:       192.203.54.216
    Boot File Name:    c:\aview\dl00h.cfx
Fast NMM Out-Of-Band Parameters
    Baud Rate:         9600
Type <sp> to continue...
```

Figure 3-3 General Information screen

The General Information screen displays the compilation date and time as well as the current network settings. To change any of the network settings, you need to access the Configuration menu (see the section titled "Configuration Main Menu" later in this chapter for more information).

To exit the General Information screen, press the **space bar** on your keyboard. This will bring you back to the Main Menu.

Configuration Main Menu

The Configuration Main Menu allows you to view and change your network configurations. These configurations include system administration information, TCP/IP parameters, port parameters, and IP mapping.

Accessing the Configuration Main Menu

1. From the Main Menu, type **c**.
2. At the "Enter Password" prompt, type your password, then press return.

   Note: The default password when you first access the Configuration Menu is **Asante**. The password is case sensitive. For more information on passwords, see the section titled "Set Console Password" in this chapter.
3. The following Configuration Menu will appear:

```
AsanteFast 100 NMM Configuration Menu

<Cmd>          <Description>
  a       Config System Administration Information
  o       Config Out-Of-Band Parameters
  i       Config TCP/IP Parameters
  b       Config Bootstrap Parameters
  s       Config SNMP Parameters
  p       Config Port Parameters
  n       Display Node Summary
  t       Set Telnet Idle Time-out
  c       Set Console Password
  e       Reset EEPROM To Default
  r       Reset System
  q       Exit Configuration Menu
```

Figure 3-4 Configuration Main Menu

4 From this menu you can access the following configuration submenus by typing the command letter of the corresponding menu option (e.g., type **a** for the Configure System Administration Information menu):

Configure System Administration Information

This menu displays and allows you to change the hub stack's name, location and contact information.

To access the System Administration Information menu, type **a** from the Configuration Main Menu. The following menu will appear:

```
AsanteFast 100 NMM System Administration Information Menu

Hub Name:       <none>
Hub Location:   <none>
Hub Contact:    <none>

<Cmd>           <Description>
  n         Set Hub Name
  l         Set Hub Location
  c         Set Hub Contact Information
  q         Return to Previous Menu

Command>
```

Figure 3-5 System Administration Information menu

1 To set or change the hub stack's name, location or contact information, type the command letter of the corresponding menu option.

2 When prompted, type a new name/location/contact name (up to 64 characters each), then press return.

To cancel this option, and not make any changes to the hub stack's name, location, or contact information, press **ctrl-c** at the command prompt.

3 The new information you just entered will be displayed at the top of the screen.

4 To quit and return to the Configuration Main Menu, type **q**.

Configure Out-Of-Band Parameters

This menu displays and allows you to change the out-of-band parameters used when accessing the Management Module remotely.

To access the Out-Of-Band Parameter menu, type **o** from the Configuration Main Menu. The following screen will appear:

```
AsanteFast 100 NMM Out-Of-Band Parameter Menu

Hub Out-Of-Band Baud Rate:    9600
<Cmd>           <Description>
  a        Set Out-Of-Band Baud Rate to 1200 Baud
  b        Set Out-Of-Band Baud Rate to 2400 Baud
  c        Set Out-Of-Band Baud Rate to 4800 Baud
  d        Set Out-Of-Band Baud Rate to 9600 Baud
  q        Return to Previous Menu

Command>
```

Figure 3-6 Out-Of-Band Parameter menu

Out-Of-Band Baud Rate

To change the Out-of-Band Baud Rate, type the command letter of the corresponding baud rate menu option (e.g., type **a** to set the baud rate to 1200; type **b** to set the baud rate to 2400**)**.

To exit the Out-Of-Band Parameter menu, type **q**.

Configure TCP/IP Parameters

This menu displays and allows you to change a hub stack's IP address, subnet mask and default router information.

To access the Configure TCP/IP Parameter menu, type **i** from the Configuration Main Menu. The following screen will appear:

```
AsanteFast 100 NMM TCP/IP Parameter Menu

Hub IP Address:       192.203.54.224
Hub Subnet Mask:      255.255.255.0
Hub Default Router:   192.203.54.1

<Cmd>           <Description>
  i        Set IP Address
  m        Set Subnet Mask
  r        Set Default Router Address
  q        Return to Previous Menu

Command>
```

Figure 3-7 TCP/IP Parameter menu

By default, each parameter is set to **0.0.0.0**. To change a parameter, type the command letter of the corresponding menu option. When prompted, type the new address, then press enter. The new address will be displayed at the top of the screen.

To exit this menu and return to the Configuration Main Menu, type **q**.

Configure Bootstrap Parameters

This menu allows you to view and change the bootstrap parameters (boot load mode, boot mode, and boot server IP address) used for downloading a new version of runtime software for the Management Module.

To access the Bootstrap Parameters menu, type **b** from the Configuration Main Menu. The following screen will appear:

```
AsanteFast 100 NMM BootStrap Parameter Menu

Boot Load Mode:           LOCAL
Boot Mode:                TFTP
Boot Server IP Address:   192.203.54.216
Boot File Name:           c:\aview\dl00h.cfx

<Cmd>          <Description>
  l        Set Load Mode to Local
  r        Set Load Mode to Remote
  b        Set Boot Mode to Bootp-tftp
  t        Set Boot Mode to Tftp
  s        Set Boot Server IP Address
  f        Set Boot File Name
  q        Return to Previous Menu

Command>
```

Figure 3-8 BootStrap Parameter menu

By default, the bootstrap parameter settings are configured to initiate downloading from AsantéView. In most cases, you will never have to change the bootstrap parameters. If you do change the bootstrap parameters, follow these guidelines:

Initiate downloading from AsantéView (default setting):

- ❏ On the AsantéView machine, select Configure, then Software Upgrade. Make sure you also turn on the BootP and TFTP application in AsantéView.
- ❏ On the Management Module, the boot load mode should remain set to **LOCAL**. You do not have to set the boot mode, boot server IP address or boot file name.

Initiate downloading from the hub:

- ❏ On the Management Module, change the boot load mode to **REMOTE** by typing **r** from the Bootstrap Parameter menu.
- ❏ If you have an IP address already configured, choose **TFTP** for the boot mode. Make sure AsantéView's TFTP application is enabled.

- ❏ If you do not have an IP address configured, choose **Bootp-tftp** for the boot mode. Make sure Asanté-View's Bootp and TFTP applications are enabled.
- ❏ Power cycle the Management Module as well as the entire hub stack (following the proper power-up cycle procedure as described in Chapter 2).

To exit the BootStrap Parameter menu type **q**.

Configure SNMP Parameters

The Management Module is an SNMP (Simple Network Management Protocol) manageable device. You can change the SNMP parameters such as read/write settings, trap authentication, and trap receivers by accessing the Configure SNMP Parameter menu.

To access the Configure SNMP Parameter menu, type **s** from the Configuration Main Menu. The following screen will appear:

```
AsanteFast 100 NMM SNMP Parameter Menu

SNMP Read Community:      public
SNMP Write Community:     private

Trap Authentication:      DISABLED
SNMP Trap Receivers:
     IP Address           Community
     0.0.0.0              <Not Used>
     0.0.0.0              <Not Used>
     0.0.0.0              <Not Used>
     0.0.0.0              <Not Used>

<Cmd>          <Description>
  r       Set SNMP Read Community
  w       Set SNMP Write Community
  t       Toggle Trap Authentication Traps
  a       Add SNMP Trap Receiver Entry
  d       Delete SNMP Trap Receiver Entry
  q       Return to Previous Menu

Command>
```

Figure 3-9 SNMP Parameter menu

SNMP Read and Write Community

By default, the SNMP Read Community is set to PUBLIC. To change the Read Community, type **r** from the SNMP Parameter menu. At the prompt, type a new community, then press return.

By default, the SNMP Write Community is set to PRIVATE. To change the Write Community, type **w** from the SNMP Parameter menu. At the prompt, type a new community, then press return.

Trap Authentication Traps

This option indicates whether the SNMP agent process is permitted to generate authentication-failure traps.

By default, the Trap Authentication option is DISABLED. To enable Trap Authentication, type **t**. This will toggle the Trap Authentication option through ENABLE and DISABLE.

SNMP Trap Receiver

This option sets the receiving station address for SNMP traps. Normally, these addresses will be the same as your network management software systems' IP addresses.

To add an SNMP Trap Receiver address, type **a** from the SNMP Parameter menu. At the prompt, type an IP address, then press return.

To delete an SNMP Trap Receiver address, type **d** from the SNMP Parameter menu. At the prompt, type the address to be deleted, then press return.

Configure Port Parameters

From this menu you can configure all of your port parameters on a particular hub.

To access the Configure Port Parameter menu, type **p** from the Configuration Main Menu. The following screen will appear:

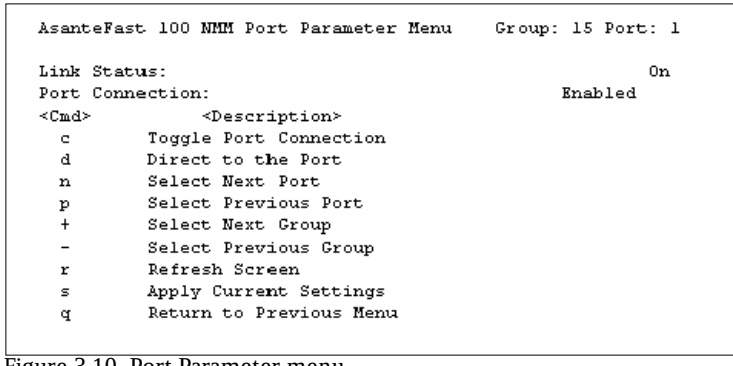

AsanteFast 100 NMM Port Parameter Menu Group: 15 Port: 1
Link Status: On
Port Connection: Enabled
<Cmd> <Description>
c Toggle Port Connection
d Direct to the Port
n Select Next Port
p Select Previous Port
+ Select Next Group
- Select Previous Group
r Refresh Screen
s Apply Current Settings
q Return to Previous Menu

Figure 3-10 Port Parameter menu

Note: If the screen "No Port Parameters" appears, you are looking at the Group number for the Management Module, not a hub. Follow the directions below ("Changing Hubs") to view a hub.

The Port Parameter menu will display port information for one port on one hub at a time. The hub you are viewing is listed as "Group number" in the upper right corner of the screen. The port you are viewing is listed as "Port number" in the upper right corner of the screen.

Changing Hubs

To view port parameters for another hub (group), type + on your keyboard (advances you to the next group) or type **-** (brings you to the previous group).

Changing Ports

To view port parameters for another port on a hub, type **n** for the next port, type **p** for previous port or type **d** (direct to port), then a port number.

Toggle Port Connection

This option enables or disables the selected port connection.

Type **c** from the Port Parameter Menu to toggle through enabling or disabling the port. (The status of the port connection will be displayed at the top of the screen.)

Type **a** (apply current settings) for the change to take effect.

Refresh Screen

This option allows you to reset the Port Parameter menu to the original settings (for example, if you enable a port that was originally disabled when you opened the Port Parameter menu, type **r** — refresh screen — to reset the port to disabled).

Apply Current Settings

This option must be selected after changing the toggle port connection option in order for the new port connection to take effect.

To exit the Port Parameter menu and return to the Configuration Main Menu, type **q**.

Node Summary Display Menu

This menu displays the last MAC addresses, last IP addresses and link status for a group of ports on a hub.

To access the Node Summary Display menu, type **n** from the Configuration Menu. The following menu will appear:

```
AsanteFast 100 NMM Node Summary Display Menu :
                Group : 15                                  Elapse Time :
_____________________________________________________________________
| Group | Port |  Last MAC Address   |  Last IP Address   |  LINK  |
---------------------------------------------------------------------
|   15  |  01  |  00:00:94:10:80:1E  |  xxx.xxx.xxx.xxx   |  ON    |
---------------------------------------------------------------------
|   15  |  02  |  00:00:00:00:00:00  |  xxx.xxx.xxx.xxx   |  OFF   |
---------------------------------------------------------------------
|   15  |  03  |  00:00:00:00:00:00  |  xxx.xxx.xxx.xxx   |  OFF   |
---------------------------------------------------------------------
|   15  |  04  |  00:00:94:10:80:28  |  xxx.xxx.xxx.xxx   |  ON    |
---------------------------------------------------------------------
|   15  |  05  |  00:00:00:00:00:00  |  xxx.xxx.xxx.xxx   |  OFF   |
---------------------------------------------------------------------
|   15  |  06  |  00:00:00:00:00:00  |  xxx.xxx.xxx.xxx   |  OFF   |
---------------------------------------------------------------------


IP Address Mapping Function Is DISABLED!!

e>nable IP mapping
s>top, direct t>o group, +>next grp, ->prev grp, n>p7-p12, q>uit
```

Figure 3-11 Node Summary Display menu

The Node Summary Display menu will display information for six ports on a hub at a time (the six port numbers displayed are listed under the column labeled "Port"; the hub displayed is listed under the column labeled "Group").

To view the next six ports, type **n**. To view another hub, type + for the next hub or - for the previous hub.

Last MAC Address

This displays the last known source MAC address that is associated with a particular port. This address is directly correlated with an IP address (shown in the Last IP Address column if IP address mapping is enabled).

Last IP Address

This displays the last IP address associated with the last MAC address on a port.

The IP address mapping feature must be enabled in order for the last IP addresses to be displayed. If the mapping feature is disabled, the IP Address column will display xxx.xxx.xxx.xxx instead of the IP addresses. If there is no match between the last MAC address and last IP address, 0.0.0.0. will be displayed.

To enable the IP address mapping feature, type **e** from the Node Summary Display menu.

LINK

This displays the current link status of the port — ON means a healthy connection, OFF means there is no port connection.

Set Telnet Idle Time Out

This option sets the idle time-out period when using Telnet to access the Management Module. If a Telnet connection to the Management Module remains idle for the number of specified time-out minutes, the remote Telnet connection to the module will automatically be disabled.

To access the Telnet Idle Time Out option, type **t** from the Configuration Main Menu. The following two lines will appear at the bottom of the Configuration Main Menu:

```
Current idle time = 20 minute(s)
Enter Idle Time in Minutes (0 means no time-out):
```

Figure 3-12 Set TelNet Idle Time Out command line

The current idle time will be displayed in minutes. To set a new idle time out period, enter the number of minutes at the "Enter Idle Time in Minutes" command line, then press return.

Note: The default and recommended time-out period is 20 minutes.

To exit this option without making any changes to the current idle time out, press **ctrl-c**.

Set Console Password

The console password is the password needed to access the Configuration Main Menu. By default, the password is **Asante**.

1 To change the current console password, type **c** from the Configuration Main Menu. The following command line will appear at the bottom of the Configuration Main Menu:

```
Enter New Password (Max length is 20) >
```

Figure 3-13 Set Console Password command line

2 Type a new password at the "Enter New Password" prompt, then press return.

Note: The console password is case sensitive. The password must be a minimum of one character and a maximum of 20 characters in length. The password takes any ASCII code.

3 At the confirmation password prompt, type your new password again, then press return.

Reset EEProm to Default

The Reset EEProm option allows you to reset all values in the hub stack to the default.

To reset the EEPROM to the default, type **e** from the Configuration Main Menu. The following command line will appear at the bottom of the Configuration Main Menu:

```
Are you sure you want to reset EEPROM to default?(y/N)
```

Figure 3-14 Reset EEProm to Default command line

Type **y** to reset the EEPROM to default. Type **n** to keep the current values and return to the Configuration Main Menu.

Reset System

This option allows you to reset the network by performing a "warm" reboot of the Management Module.

To reset the system, type **r** from the Configuration Main Menu. The following command line will appear at the bottom of the screen:

```
Are you sure you want to reset the system?(y/N)
```

Figure 3-15 Reset System command line

Type **y** to reset the system. Type **n** to return to the Configuration Main Menu.

Statistics Menu

The Statistics Menu monitors and displays current network information such as traffic, collisions, good frames, bad frames, and FCS errors on a per-stack, per-hub, per-port basis.

To access the Statistics Menu, type **s** from the Main Menu. The following screen will appear:

```
AsanteFast 100 NMM Statistics Menu

<Cmd>           <Description>
  h        Display Segment Counters
  g        Display Group Counters
  p        Display Port Counters
  q        Return to Previous Menu

Command>
```

Figure 3-16 Statistics Menu

The Statistics Menu consists of three subscreens — Display Segment Counters (displays statistics for the entire hub stack), Display Group Counters (displays statistics for individual hubs within the stack), and Display Port Counters (displays statistics for each port on a hub within the stack).

To access a Statistics subscreen, type the command letter of the corresponding menu option (e.g., type **h** for the Display Segment Counters screen).

Display Segment Counters

This screen monitors and displays information for the entire hub stack. The Segment Counters are monitored each second; however, the screen is updated every 10 seconds (listed as "Elapsed Time" in the upper right corner of the screen).

To access the Display Segment Counters screen, type **h** from the Statistics Menu. The following screen will appear:

```
AsanteFast 100 NMM Segment Counters                          Elapse Time:

<Counter Name>      <Curr/s>       <Peak/s>       <Avg/s>        <Total>
 Good Frames         0              0              0              0
 Bad Frames          0              0              0              0
 Short Event         0              0              0              0
 Runts               0              0              0              0
 Frame Too Long      0              0              0              0
 FCS Errors          0              0              0              0
 Alignment Errors    0              0              0              0
 DRM Errors          0              0              0              0
 Collisions          0              0              0              0
 Late Collisions     0              0              0              0
 Auto Partitions     0              0              0              0
 Readable Octets     0              0              0              0
 MJLPs               0              0              0              0

r>eset, s>top, q>uit
```

Figure 3-17 Segment Counters screen

Counters

The Segment Counters screen displays the number of occurrences for each counter in the hub stack. For a definition and description of each counter name, please refer to the Standard Repeater RFC 1516 — "Definitions of Manager Objects for IEEE 802-3 Repeater Device."

Monitoring a Segment

Each hub stack's counters are monitored in four columns: Current/per second, Peak/per second, Average/per second, and Total.

The Current/per second column lists the number of counter occurrences each second.

The Peak/per second column lists the largest number of counter occurrences since opening or resetting the screen.

The Average/per second column lists the average number of counter occurrences since opening or resetting the screen.

The Total column lists the total number of counter occurrences since opening or resetting the screen.

Time Clock

The elapsed time clock updates information on the hub stack every 10 seconds. It is located in the upper right corner of the screen and displays the number of hours, minutes and seconds of the current monitored time period.

Resetting the Segment Counters screen

To reset the Segment Counters screen (resets the elapsed time clock to 00:00:00), type **r**. To stop the monitoring of the Segment Counters and freeze the screen with the current totals, type **s**.

To exit the Display Segment Counters screen, type **q**.

Display Group Counters

This screen monitors and displays information on individual hubs within the hub stack. Each hub is numbered as a Group and is monitored every second; however, the screen is updated every 10 seconds (listed as "Elapsed Time" in the upper right corner of the screen).

To access the Display Group Counters screen, type **h** from the Statistics Menu. The following screen will appear:

```
AsanteFast 100 NMM Group Counters          Group: 15      Elapse Time: 00:00

<Counter Name>      <Curr/s>       <Peak/s>       <Avg/s>        <Total>
 Good Frames         3619           3619           3619           40180
 Bad Frames          5              5              5              63
 Short Event         0              0              0              0
 Runts               79             79             79             884
 Frame Too Long      1              1              0              6
 FCS Errors          5              5              5              57
 Alignment Errors    0              0              0              0
 DRM Errors          0              0              0              0
 Collisions          1              1              0              3
 Late Collisions     0              0              0              0
 Auto Partitions     0              0              0              0
 Readable Octets     62817          62817          62817          22172111
 MJLPs               0              0              0              0

r>eset, s>top, d>irect to, n>ext group, p>rev group, q>uit
```

Figure 3-18 Group Counters screen

Counters

The Group Counters screen displays the number of occurrences for each counter on a hub. For a definition and description of each counter name, please refer to the Standard Repeater RFC 1516 — "Definitions of Manager Objects for IEEE 802-3 Repeater Device."

Note: Because there is only one collision domain, the number of Collisions in the Group Counters screen is the same as the number of Collisions in the Segment Counters screen.

Monitoring a Group

Each module in the interconnected AsantéFAST 100 Management Module and 100 hub stack is assigned a Group number. The bottom module is assigned Group number 15, the next module up is Group 14, and so on. When using the command line interface to monitor the hub stack, each module is referred to by that group number.

The hub that is being monitored will be listed as "Group" and a number (displayed in the upper right corner of the screen). To monitor another group, type **n** for the next group or **p** for the previous group. To go directly to another group, type **d** (direct to), then enter the group number and press return.

Note: If the message "No Group Counters" is displayed, you are looking at the Group number for the Management Module, not a hub. Follow the directions above to view a hub.

Each hub's counters are monitored in four columns: Current/per second, Peak/per second, Average/per second, and Total.

The Current/per second column lists the number of counter occurrences each second.

The Peak/per second column lists the largest number of counter occurrences since opening or resetting the Group Counters screen.

The Average/per second column lists the average number of counter occurrences since opening or resetting the Group Counters screen.

The Total column lists the total number of counter occurrences since opening or resetting the Group Counters screen.

Time Clock

The elapsed time clock updates information on the hub every 10 seconds. It is located in the upper right corner of the screen and displays the number of hours, minutes and seconds of the current monitored time period.

Resetting the Segment Counters screen

To reset the Group Counters screen (resets the elapsed time clock to 00:00:00), type **r**. To stop monitoring the Group Counters and freeze the screen with the current totals, type **s**.

To exit the Display Group Counters menu, type **q**.

Display Port Counters

This screen monitors and displays statistics for individual ports on a hub within the hub stack. Each port is monitored every second; however, the screen is updated every 10 seconds (listed as "Elapsed Time" in the upper right corner of the screen).

To access the Display Port Counters screen, type p from the Statistics Menu. The following screen will appear:

```
AsanteFast 100 NMM Port Counters  Grp: 15 Port: 1   Elapse Time: 00:00:00

<Counter Name>      <Curr/s>      <Peak/s>      <Avg/s>       <Total>
 Good Frames         0             0             0             0
 Bad Frames          0             0             0             0
 Short Event         0             0             0             0
 Runts               0             0             0             0
 Frame Too Long      0             0             0             0
 FCS Errors          0             0             0             0
 Alignment Errors    0             0             0             0
 DRM Errors          0             0             0             0
 Collisions          0             0             0             0
 Late Collisions     0             0             0             0
 Auto Partitions     0             0             0             0
 Readable Octets     0             0             0             0
 MJLPs               0             0             0             0

r>eset, s>top, d>irect to, n>ext port, p>rev port, +>next grp, ->prev grp,
```

Figure 3-19 Port Counters screen

Counters

The Port Counters screen displays the number of occurrences for each counter on a port. For a definition and description of each counter name, please refer to the Standard Repeater RFC 1516 — "Definitions of Manager Objects for IEEE 802-3 Repeater Device."

Monitoring a Port

The Port being monitored will be displayed at the top of the screen next to the hub (Group number). To monitor another hub's ports, type + for the next group or - for the previous group. To view another port on the current hub, type **n** for next port or **p** for previous port. To go directly to another port, type **d** (direct to), then enter the port number and press return.

Each port's counters are monitored in four columns: Current/per second, Peak/per second, Average/per second, and Total.

The Current/per second column lists the number of counter occurrences each second.

The Peak/per second column lists the largest number of counter occurrences since opening or resetting the screen.

The Average/per second column lists the average number of counter occurrences since opening or resetting the screen**.**

The Total column lists the total number of counter occurrences since opening or resetting the screen**.**

Time Clock

The elapsed time clock updates information on the port every 10 seconds. It is located in the upper right corner of the screen and displays the number of hours, minutes and seconds of the current monitored time period.

Resetting the Port Counters screen

To reset the Port Counters screen (resets the elapsed time clock to 00:00:00), type **r**. To stop the monitoring of the Port Counters and freeze the screen with the current totals, type **s**.

To exit the Display Port Counters menu, type **q**.

A

Technical Specifications

CONFIGURATION

The Management Module snaps into hub stack. Maximum stack height is 15 units including the Management Module.

NETWORK MANAGEMENT PLATFORMS SUPPORTED

Telnet, AsantéView management software, SNMP-compatible management software

LEDs

Network utilization and collision bargraphs

CONNECTOR

One RS-232 console port (DB9), one RS-232 modem/out-of-band port (DB-9)

MIB REPEATERS SUPPORTED:

MIB I and MIB II, IETF RFC 1516 Repeater MIB

DIMENSIONS:

437x208x40 mm (17.2x8.2x1.58 in.) — 1 RU rack unit high when mounted in a standard 19-inch rack.

WEIGHT

2.73 kg (6 lbs)

POWER SUPPLY

100 to 24o V, 50/60Hz, .5A at 115V

ENVIRONMENTAL OPERATING RANGE

Temperature: 0° to 50° C, Relative Humidity: 5% to 85% non-condensing.

INCLUDED ACCESSORIES

19-inch rack mount brackets, expansion card

STANDARDS COMPLIANCE

UL, CSA, TUV, FCC Class A, CE Class B

SUPPORT

Lifetime warranty * Free technical support * World Wide Web * Commercial On-line BBS

B

Technical Support

Contacting Technical Support

To contact Asanté Technical Support:

Telephone	(800) 622-7464
	(408) 435-0706
Fax	(408) 432-6018
Fax-Back	(800) 741-8607
	(408) 954-8607
Bulletin Board Service (BBS)	(408) 432-1416
ARA BBS (guest log in)	(408) 894-0765
AppleLink mail/BBS	ASANTE
FTP Archive	ftp.asante.com
Internet Mail	support@asante.com
WorldWide Web Site	http://www.asante.com

Technical Support Hours

6:00 AM to 6:00 PM Pacific Standard time USA, Monday - Friday.

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